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09/995,235	11/26/2001	Helena O'Shea	010403	9661

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Patents Department
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EXAMINER	
NGUYEN, TOAN D	

ART UNIT	PAPER NUMBER
2665	8

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/995,235	O'SHEA, HELENA	
	Examiner	Art Unit	
	Toan D Nguyen	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2004* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3, 5-6, 8-9, 11-13, 15-17, 19-20, 22-25, 27-28, 31-34, 36-37 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Upton et al. (U.S. 5,784,695) in view of Mui (U.S. 5,432,819).

For claim 1, Upton et al. disclose method and apparatus for handover control in a satellite based telecommunications system comprising:

obtaining frequency estimation information from a first wireless signal received from a first carrier (figure 2, reference 26, col. 5 lines 8-12);

performing a handover to a second carrier (figure 2, col. 6 lines 36-39, col. 7 lines 12-20); and

However, Upton et al. does not disclose configuring a frequency tracking loop for receiving a second wireless signal from the second carrier as a function of the frequency estimation information. In an analogous art, Mui discloses configuring a frequency tracking loop (figure 1, reference 28) for receiving a second wireless signal from the second carrier (reference 23) as a function of the frequency estimation information (figure 1, reference 26) (col. 3 lines 35-39 and col. 3 lines 48-52). One skilled in the art would have recognized a frequency tracking loop to use the teachings of Mui in the system of Upton et al. Therefore, it would have been

obvious to one of ordinary skill in the art at the time of the invention, to use the frequency tracking loop as taught by Mui in Upton et al.'s system with the motivation being to produce an estimate f_{re} of the received carrier nominal frequency f_r which estimate, are applied to filter 21-23 (figure 1, col. 32-36).

For claim 2, Upton et al. disclose wherein the frequency estimation information comprises a frequency offset (col. 7 lines 32-34).

For claim 3, Upton et al. disclose wherein the first wireless signal is a CDMA signal and the second wireless signal is a GSM signal (col. 5 lines 10-16).

For claim 5, Upton et al. disclose wherein the first wireless signal is a GSM signal and the second wireless signal is a CDMA signal (col. 5 lines 10-16).

For claim 6, Upton et al. disclose wherein the frequency tracking loop configures a voltage-controlled, temperature-compensated oscillator as a function of the frequency estimation information (col. 6 lines 45-50 and col. 6 lines 64-66).

For claim 8, Upton et al. disclose obtaining handover information during an allocated time slot (col. 4 lines 1-3).

For claim 9, Upton et al. disclose wherein the handover information comprises at least one of received signal code power (RSCP), signal-to-interference ratio (SIR), and a received signal strength indicator (RSSI) (col. 6 lines 54-57).

For claim 11, Upton et al. disclose method and apparatus for handover control in a satellite based telecommunications system comprising:

obtaining frequency estimation information from a first wireless signal received from a first carrier (figure 2, reference 26, col. 5 lines 8-12);

performing a handover to a second carrier (figure 2, col. 6 lines 36-39, col. 7 lines 12-20).

However, Upton et al. does not disclose configuring a frequency tracking loop for receiving a second wireless signal from the second carrier as a function of the frequency estimation information. In an analogous art, Mui discloses configuring a frequency tracking loop (figure 1, reference 28) for receiving a second wireless signal from the second carrier (reference 23) as a function of the frequency estimation information (figure 1, reference 26) (col. 3 lines 35-39 and col. 3 lines 48-52). One skilled in the art would have recognized a frequency tracking loop to use the teachings of Mui in the system of Upton et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the frequency tracking loop as taught by Mui in Upton et al.'s system with the motivation being to produce an estimate f_{re} of the received carrier nominal frequency f_r which estimate, are applied to filter 21-23 (figure 1, col. 32-36).

For claim 12, Upton et al. disclose wherein the frequency estimation information comprises a frequency offset (col. 7 lines 32-34).

For claim 13, Upton et al. disclose wherein the first wireless signal is a CDMA signal (col. 5 lines 10-16).

For claim 15, Upton et al. disclose wherein the second wireless signal is a GSM signal (col. 5 lines 10-16).

For claim 16, Upton et al. disclose wherein the first wireless signal is a GSM signal and the second wireless signal is a CDMA signal (col. 5 lines 10-16).

For claim 17, Upton et al. disclose wherein the frequency tracking loop configures a voltage-controlled, temperature-compensated crystal oscillator as a function of the frequency estimation information (col. 6 lines 45-50 and col. 6 lines 64-66).

For claim 19, Upton et al. disclose processor executable instructions for obtaining handover information during an allocated time slot (col. 4 lines 1-3).

For claim 20, Upton et al. disclose wherein the handover information comprises at least one of received signal code power (RSCP), signal-to interference ratio (SIR), and a received signal strength indicator (RSSI) (col. 6 lines 54-57).

For claim 22, Upton et al. disclose method and apparatus for handover control in a satellite based telecommunications system comprising:

a first receiver to receive a first signal from a first carrier (figures 2 and 3, reference 26, col. 5 lines 17-19);

a second receiver to receive a second signal from a second carrier (figures 2 and 3, reference 27, col. 7 lines 17-20).

However, Upton et al. does not disclose a first frequency tracking loop to obtain frequency estimation information relating to the first signal; and a second frequency tracking loop to obtain frequency estimation information relating to the second signal as a function of the frequency estimation information relating to the first signal.

In an analogous art, Mui discloses a first frequency tracking loop to obtain frequency estimation information relating to the first signal (figure 1, reference 22); and a second frequency tracking loop to obtain frequency estimation information relating to the second signal as a

function of the frequency estimation information relating to the first signal (figure 1, reference 23, col. 3 lines 35-39 and col. 3 lines 48-52).

One skilled in the art would have recognized a frequency tracking loop to use the teachings of Mui in the system of Upton et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the frequency tracking loop as taught by Mui in Upton et al.'s system with the motivation being to produce estimate f_{re} of the received carrier nominal frequency f_r which estimate, are applied to filter 21-23 (figure 1, col. 32-36).

For claim 23, Upton et al. disclose wherein the first frequency tracking loop is configured to obtain the frequency estimation information relating to the first signal as a function of the frequency estimation information relating to the second signal (col. 7 lines 21-55).

For claim 24, Upton et al. disclose wherein at least one of the first and second frequency estimation information comprises a frequency offset (col. 7 lines 32-34).

For claim 25, Upton et al. disclose wherein at least one of the first and second frequency tracking loops configures a voltage-controlled, temperature-compensated crystal oscillator (col. 6 lines 45-50 and col. 6 lines 64-66).

For claim 27, Upton et al. disclose wherein at least one of the first and second

receivers is configured to obtain handover information during an allocated time slot (col. 4 lines 1-3).

For claim 28, Upton et al. disclose wherein the handover information comprises at least one of received signal code power (RSCP), signal-to-interference ratio (SIR), and a received signal strength indicator (RSSI) (col. 6 lines 54-57).

For claim 31, Upton et al. disclose wherein at least one of the first and second receivers comprises a GSM receiver (col. 5 lines 10-16).

For claim 32, Upton et al. disclose method and apparatus for handover control in a satellite based telecommunications system comprising:

means for obtaining frequency estimation information from a first wireless signal received from a first carrier (figure 2, reference 26, col. 5 lines 8-12);

means for performing a handover to a second carrier (figure 2, col. 6 lines 36-39, col. 7 lines 12-20).

However, Upton et al. does not disclose means for configuring a frequency tracking loop for receiving a second wireless signal from the second carrier as a function of the frequency estimation information. In an analogous art, Mui discloses configuring a frequency tracking loop (figure 1, reference 28) for receiving a second wireless signal from the second carrier (reference 23) as a function of the frequency estimation information (figure 1, reference 26) (col. 3 lines 35-39 and col. 3 lines 48-52). One skilled in the art would have recognized a frequency tracking loop to use the teachings of Mui in the system of Upton et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the frequency tracking loop as taught by Mui in Upton et al.'s system with the motivation being to produce an estimate f_{re} of the received carrier nominal frequency f_r which estimate, are applied to filter 21-23 (figure 1, col. 32-36).

For claim 33, Upton et al. disclose wherein the frequency estimation information comprises a frequency offset (col. 7 lines 32-34).

For claim 34, Upton et al. disclose wherein the first wireless signal is a CDMA

signal and the second wireless signal is a GSM signal (col. 5 lines 10-16).

For claim 36, Upton et al. disclose wherein the first wireless signal is a GSM signal and the second wireless signal is a CDMA signal (col. 5 lines 10-16).

For claim 37, Upton et al. disclose wherein the frequency tracking loop configures a voltage-controlled, temperature-compensated oscillator as a function of the frequency estimation information (col. 6 lines 45-50 and col. 6 lines 64-66).

For claim 39, Upton et al. disclose means for obtaining handover information during an allocated time slot (col. 4 lines 1-3).

For claim 40, Upton et al. disclose wherein the handover information comprises at least one of received signal code power (RSCP), signal-to-interference ratio (SIR), and a received signal strength indicator (RSSI) (col. 6 lines 54-57).

3. Claims 4, 10, 14, 21, 29, 35 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Upton et al. (U.S. 5,784,695) in view of Mui (U.S. 5,432,819) further in view of Joon (EP 1126637A2).

For claims 4, 10, 14,21, 29, 35 and 41, Upton et al. in view of Mui do not disclose wherein the CDMA signal is one of a W-CDMA signal and a CDMA2000 signal. In an analogous art, Joon discloses wherein the CDMA signal is one of a W-CDMA signal and a CDMA2000 signal (page 1 line 2). Joon further discloses wherein the allocated time slot occurs during a compressed mode (page 1 line 2-3 as set forth in claims 10, 21, 29 and 41).

One skilled in the art would have recognized a W-CDMA signal to use the teachings of Joon in the system of Upton et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time if the invention, to use the W-CDMA signal and a CDMA2000 signal as

taught by Joon in Upton et al. with the motivation being to operate in a compression mode to restore perfect fram synchronization words in frames by using dedicated pilot sequence pattern (page 1 line 2 to page 2 line 2).

4. Claims 7, 18, 26, 30 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Upton et al. (U.S. 5,784,695) in view of Mui (U.S. 5,432,819) further in view of Zehavi et al. (U.S. 5,691,974).

For claims 7, 18, 26, 30 and 38, Upton et al. in view of Mui do not disclose wherein the frequency tracking loop configures a rotator as a function of the frequency estimation information. In an analogous art, Zehavi et al. disclose a rotator as a function of the frequency estimation information (figure 9A, col. 23 lines 35-37). Zehavi et al. disclose further wherein at least one of the first and second receivers comprises a RAKE receiver (figure 8, col. 21 lines 29-30 as set forth in claim 30).

One skilled in the art would have recognized a rotator as a function of the frequency estimation information to use the teachings of Zehavi et al. in the system of Upton et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the rotator as taught by Zehavi et al. in Upton et al.'s system with the motivation being to use as the upper and lower tracking loop arms (col. 23 lines 35-54).

Response to Arguments

5. Applicant's arguments with respect to claims 1-41 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D Nguyen whose telephone number is 703-305-0140. The examiner can normally be reached on Monday- Friday (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 703-308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

TN
T.N.

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